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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,388	07/07/2006	Akiko Uchikawa	10873.1920USWO	2992

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HAMRE, SCHUMANN, MUELLER & LARSON P.C.
P.O. BOX 2902
MINNEAPOLIS, MN 55402-0902

EXAMINER

HUNTLEY, DANIEL CARROLL

ART UNIT	PAPER NUMBER
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3737

MAIL DATE	DELIVERY MODE
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06/25/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,388	Applicant(s) UCHIKAWA ET AL.	
	Examiner DANIEL HUNTLEY	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because it contains more than 150 words and also includes legal phraseology such as means plus function language which is considered improper. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 1-5 are objected to because of the following informalities: In claims 1 and 2, line 11 respectively, 'filtering processing' should be changed to *either* 'filter processing', 'filtering and processing', 'filtering', *or* 'processing'. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 3737

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7,604,596 B2 (Hwang('596)) in view of US 6,679,846 B2 (Napolitano('846)).

In re claims 1 and 2, Hwang('596) teach an ultrasonic signal processor in the field of ultrasonic diagnostics. Specifically, Hwang('596) teach a device comprising plural memory devices for storing both digital reception beam and a two-dimensional Doppler data output (col 3, lns 5-28); a control device for controlling reading and writing of data to the memory devices (col 3, lns 29-45); spatial filters for received beams including Doppler data and associated variable filter coefficients (abstract; col 5); a display (col 3, lns 55-67). It is noted that Hwang('596) do not expressly teach a filter coefficient calculation portion. However, in the field of medical ultrasound imaging, Napolitano('846) teaches spatial filter coefficients that are determined as a function of range, elevation, and /or azimuth (col 14). Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ultrasound circuitry as disclosed by Hwang('596) with the filter coefficient calculating method as disclosed by Napolitano('846) in order to vary the performance of spatial filters according to receive beam characteristics to minimize destructive interference among the receive beams (Napolitano('846) - col 5, lns 1-10).

In re claims 3-5, Hwang('596) and Napolitano('846) teach the invention as described above, and further, Napolitano('846) teach varying the filtering coefficients in accordance with a varying range, azimuth, or elevation value (col 14, lns 23-37) as well as varying transmit focal

Art Unit: 3737

position and elevation angles (col 12, lns 18-42). The examiner interprets the range dimension to represent a receive depth.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL HUNTLEY whose telephone number is (571)270-1217. The examiner can normally be reached on Monday through Friday, 7:30-4, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ruth S. Smith/
Primary Examiner, Art Unit 3737

/DANIEL HUNTLEY/
Examiner, Art Unit 3737

Application/Control Number: 10/585,388
Art Unit: 3737

Page 5